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10/679,354

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Issei Takemoto

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12/13/2005

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EXAMINER

PERRY, ANTHONY T

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/679,354

Applicant(s)

TAKEMOTO ET AL.

Examiner

Anthony T. Perry

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 9-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Claims 9-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim.

Applicant timely traversed the restriction (election) requirement in the reply filed on 9/23/05.

Applicant's election with traverse of claims 1-8 and 21 in the reply filed on 9/23/05 is acknowledged. The traversal is on the ground(s) that the amended claim 1 is generic and deemed allowable. This is not found persuasive because claim 1 is currently rejected (see rejection below). It is noted that the amended claim 1 is now in generic form for the species shown in Fig. 1 and Fig. 2 (claims 2-15 and 21).

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogura et al. (US 6,924,594) in view of Su (6,628,071).

Regarding claim 1, Ogura et al. teach a display device comprising a first substrate (810) having a display area (802) in which a plurality of pixels are arranged in a matrix array on a main surface of the first substrate and a first seal area formed at a periphery of the display area on the main surface of the first substrate (See Fig. 8B). Each of the plurality of pixels has a light emitting element and a pixel circuit (811) including an active element. A second substrate (804)

Art Unit: 2879

is disposed to cover the main surface of the first substrate with a main surface of the second substrate, and has a second seal area at a part of the main surface of the second substrate opposite to the first seal area of the first substrate. The first substrate and the second substrate are stuck together with a seal material (805) interposed between the first seal area and the second seal area. The first substrate has a cathode film (817) that is commonly utilized for the respective light emitting elements of the plurality of pixels and covers the second substrate side of the display area (802). A driving circuit (803) that drives the plurality of pixels is arranged outside of the display area (802) on the main surface of the first substrate. The cathode film (817) also covers the driving circuit (803).

Ogura et al. do not specifically teach the second substrate having a recessed portion. However, the second substrate having such a recessed portion is well known in the art (for example see pages 2-3 of the Applicant's specification). Su teaches the second substrate of a similar display device can be made to have such a recess portion within the seal area of the second substrate in order to accommodate a moisture absorbent layer such that the thickness of the display device can be reduced (see col. 2, lines 37-40). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a recess in the second substrate with a moisture absorbent layer provided therein in order to reduce the thickness of the display device.

Claims 2-8 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogura et al. (US 6,924,594) in view of Su (6,628,071), as applied to claim 1, above, and further in view of Yamada et al. (US 6,833,668).

Regarding claim 21, the combination of Ogura et al. and Su does not specifically teach that the cathode film (817) extending beyond the display area (802) and covering the driving circuit (803) has a light shielding property.

However, Yamada teaches that by using a cathode made of metal, the cathode can serve as a light shielding layer for blocking ultraviolet irradiation, used in curing the sealing material that holds the two substrates together, preventing the irradiation from reaching the organic EL layer and the driver circuits of the display device (see col. 4, lines 51-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the cathode film of the Ogura reference of a light-shielding material in order to protect the light emitting element from UV light used in the curing of the sealing material of the display device.

Regarding claim 2, Yamada teaches the light-shielding cathode being formed of silver (col. 15, lines 21-26).

Same reason for combination given in the rejection of claim 21 applies.

Regarding claims 4 and 6, Ogura teaches that the light-emitting element has a light-emitting layer formed of an organic electroluminescent material, Alq₃ (col. 16, lines 38-39). Alq₃ is an organic semiconductor.

Regarding claims 5 and 7, Ogura teaches that the first seal area surrounds the display region (802) and that the driver circuit area (803) does not extend outside the first seal area on the main surface of the first substrate (810) (see Fig. 8B).

Regarding claim 8, Su teaches that the second seal area surrounds the recessed portion formed in the main surface of the second substrate (for example, see Fig. 2).

Same reason for combination given in the rejection of claim 1 applies.

Art Unit: 2879

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogura et al. (US 6,924,594) in view of Su (6,628,071) in view of Yamada et al. (US 6,833,668) as applied to claim 21, above, and further in view of Yamazaki et al. (US 6,952,023).

Regarding claim 3, Ogura, Su, and Yamada fail to specifically teach the light-shielding cathode having a laminated structure formed by stacking two laminated films. However, Yamazaki teaches a light-shielding cathode layer formed by laminating two conductive films, such as an aluminum film and a copper film (col. 31, lines 6-10). It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. Thus, it would have been obvious to one having ordinary skills in the art at the time the invention was made to have formed the light-shielding cathode as a laminated structure formed by stacking an aluminum conductive layer and a copper conductive layer, since the selection of known materials for a known purpose is within the skill of the art.

Other Prior Art Cited

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamazaki et al. (6,894,431) teaches the cathode (437) covering the display area (403) and the driver circuit (433) (for example, see Fig. 6).

Yamazaki et al. (6,952,023) also teaches the cathode (720) covering the display area and the driver circuit (701) (for example, see Figs. 15-16).

Yamazaki et al. (6,965,195) also teaches the cathode (204) covering the display area (102) and the driver circuit (103) (for example, see Fig. 2A).

Art Unit: 2879


Yamazaki (6,956,324) also teaches the cathode (714) covering the display area and the driver circuit (709) (for example, see Fig. 8B).

Contact Information

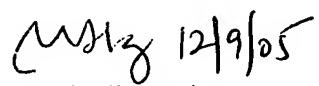
Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Anthony Perry* whose telephone number is **(571) 272-2459**. The examiner can normally be reached between the hours of 9:00AM to 5:30PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-24597. **The fax phone number for this Group is (571) 273-8300.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Anthony Perry
Patent Examiner
Art Unit 2879
December 8, 2005



Mariceli Santiago
Primary Examiner
Art Unit 2879